

## **DETAILED ACTION**

### ***Response to Amendment***

An "Amendment" was received on 21 February 2012, in response to Office Action of 19 August 2011. Claims 1, 21, 31 and 41 have been amended. Claims 1, 3-5, 7-14, 17 and 20-41 are now pending.

### ***Response to Arguments***

Applicant's arguments, see "remarks", pages 11-22, filed 21 February 2012, with respect to claims 1, 3-5, 7-14, 17 and 20-41 have been fully considered and are persuasive. The rejection of 19 August 2012 has been withdrawn.

### ***Allowable Subject Matter***

Claims 1, 3-5, 7-14, 17 and 20-41 are allowed.

The following is an examiner's statement of reasons for allowance:

BE 1011263 A6 (translation submitted by applicant on 12/16/2009) (herein '236) is the most relevant art. '236 teaches an irradiation cell for producing a radioisotope of interest through the irradiation of a target material by a particle beam. Figure 1 shows a removable insert 8 having a cavity 1 and a diffuser 3 with a space for forming a channel in which a cooling fluid can circulate.

In '236 the insert is an integral one piece element in which the parts are not removable. Independent claims 1, 21, 31 and 41 have been amended to recite "the first part removable from the irradiation cell without removal of the second part by sliding the

first part in a direction parallel to the particle beam". This would require that the parts be removable and thus two separate pieces. As discussed on page 12 on the remarks, allowing the first part to be removable allows "the first insert part may be easily replaced without the need to replace the entire insert device."

Zeisler et al. (US pgPub 2005/0201504) and Schlyer et al. (USPN 5,917,874), Erdman (USPN 6,586,747), Alvord et al. (USPN 7,831,009) and Zeisler et al. (Zeisler et al., "A water-cooled spherical niobium target for the production of [ $^{18}\text{F}$ ]fluoride", Applied Radiation and Isotopes 53 (2000) 449-453)(copy of publication submitted with the office action of 10/01/2010) also all teach irradiation cells, however, also fail to teach or fairly suggest a two part insert wherein "the first part removable from the irradiation cell without removal of the second part by sliding the first part in a direction parallel to the particle beam" as required by independent claims 1, 21, 31 and 41.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Logie whose telephone number is 571-270-1616. The examiner can normally be reached on 7:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on 571-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael J Logie/

Primary Examiner, Art Unit 2881

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